UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/692,966	10/24/2003	Mark A. Cleveland	024.0029	1845

29906 7590 12/20/2005

INGRASSIA FISHER & LORENZ, P.C.
7150 E. CAMELBACK, STE. 325
SCOTTSDALE, AZ 85251

EXAMINER	
PARSLEY, DAVID J	

ART UNIT	PAPER NUMBER
3643	

DATE MAILED: 12/20/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/692,966	CLEVELAND, MARK A.	
	Examiner	Art Unit	
	David J. Parsley	3643	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *26 October 2005*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-11* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-11* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *22 November 2004* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

Detailed Action

Amendment

1. This office action is in response to applicant's amendment dated 10-26-05 and this action is final.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 1-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 5,735,626 to Khatiblou et al. in view of U.S. Patent No. 4,879,941 to Repe et al.

Referring to claim 1, Khatiblou discloses a low shock separation joint for coupling a first structure – at 16, to a second structure – at 18, comprising, a male member – at 14, having a first major surface and a second major surface wherein at least one projection – at 50, is formed on the first and second major surface – see for example figures 1-3, a female member – at 12, having a first flange – at 38, and a second flange – at 38, wherein at least one projection – at 40-44, on the first and second flange – see for example figures 1-3, wherein surfaces of the at least one projection on the first and second flange are respectively mated to surfaces of the at least one

projection on the first and second major surface of the male member to prevent separation of the separation joint under tensile and compressive forces – see for example at 12-14 in figures 1-3, and the female member being configured to clamp and hold the male member – see at 12-14 in figures 1-3, and an explosive device – at 68, placed within a cavity of the female member – see figures 1-3, the explosive device when detonated separates the male member from the female member by bending and physically modifying the first flange and by bending and physically modifying the second flange away from the male member without causing any breakage of any component of the separation joint – see for example figures 1-3 where the flanges – at 38, must bend and physically change shape/orientation to disengage the projections – at 40-44 from the projections of the male member – at 50,54. Khatiblou et al. does not disclose the female member is configured to clamp and hold the male member without any fastening mechanism holding the first flange and the second flange to the male member. Repe et al. does disclose the female member – at 2-6, is configured to clamp and hold the male member – at 8, without any fastening mechanism holding the first flange – at 2, and the second flange – at 2, to the male member – see for example figures 2-4. Therefore it would have been obvious to one of ordinary skill in the art to take the device of Khatiblou et al. and add the female member and the male member being held together without any fastening mechanism of Repe et al., so as to allow for the device to be easier to manufacture/assemble and to facilitate quicker and easier separation of female and male members.

Referring to claim 2, Khatiblou et al. as modified by Repe et al. further discloses the female member further includes a mount – at 28,30, for attachment to the first structure – at 16 – see for example figures 1-3 of Khatiblou et al.

Referring to claim 3, Khatiblou et al. as modified by Repe et al. further discloses the female member – at 12, comprises a first and a second half structure – see opposing halves of item 12 in figures 1-3 of Khatiblou et al., wherein the first half structure includes the first flange – at 38, wherein the second half structure includes the second flange – at the other of 38, and wherein the first and second flanges oppose one another when the first and second half structures are coupled together – see for example at 12,38 in figures 1-3 of Khatiblou et al.

Referring to claim 4, Khatiblou et al. as modified by Repe et al. further discloses a clevis – see between items 28,30, in figures 1-3 of Khatiblou et al., for receiving the first structure – at 16, when the first and second half structures of the female are coupled together and wherein the clevis comprises a portion of both the first and second half structures of the female member – see for example figures 1-3 of Khatiblou et al.

Referring to claim 5, Khatiblou et al. as modified by Repe et al. further discloses the male member – at 14, is placed between the first and second flanges – at 38, and wherein fastening the first structure to the female member couples the female member to the male member – see for example – at 12,14, in figures 1-3 of Khatiblou et al.

Referring to claim 6, Khatiblou et al. as modified by Repe et al. further discloses surfaces of the at least one projection – at 40-44, of the first and second flange mated respectively to surfaces of the at least one projection – at 50,54, of the first and second major surface of the male member are non-locking – see for example figures 1-3 of Khatiblou et al.

Referring to claim 7, Khatiblou et al. as modified by Repe et al. further discloses the explosive device when detonated bends the first and second flange – at 38, away from the male member – at 14 – see for example figures 1-3 of Khatiblou et al. and wherein the first and second

flange move in an arc away from the male member – see for example figures 1-3 of Khatiblou et al. where the flanges – at 38, must bend and physically change shape/orientation to disengage the projections – at 40-44 from the projections of the male member – at 50,54.

Referring to claim 8, Khatiblou et al. as modified by Repe et al. further discloses the explosive device – at 68 of Khatiblou et al. and – at 3 of Repe et al., has a first volume within the cavity of the female member – see figures 1-2 of Khatiblou et al. and figures 2-3 of Repe et al., wherein the explosive device has a second volume after detonation – see figure 3 of Khatiblou et al. and figure 4 of Repe et al., and wherein the second volume is greater than the first volume – see for example figures 1-3 of Khatiblou et al. and figures 2-4 of Repe et al.

Referring to claim 9, Khatiblou et al. as modified by Repe et al. further discloses the explosive device includes an expandable housing –at 68 of Khatiblou et al. and – at 3 of Repe et al., around an explosive material and wherein the expandable housing does not rupture when the explosive device is detonated – see for example figures 1-3 of Khatiblou et al. and figures 2-4 of Repe et al.

Referring to claim 10, Khatiblou et al. as modified by Repe et al. further discloses the male member – at 14, further discloses a mount – at 32,34,56, for attachment to the second structure – at 18 – see for example figures 1-3 of Khatiblou et al.

Referring to claim 11, Khatiblou et al. as modified by Repe et al. further discloses the female member – at 2,3,7, comprises a deformable metal – see for example figures 2-4 of Repe et al.

Response to Arguments

3. Applicant's arguments with respect to claims 1-11 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

4. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to David J. Parsley whose telephone number is (571) 272-6890. The examiner can normally be reached on Monday-Friday from 8am to 4pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Peter Poon can be reached on (571) 272-6891. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

dp

David Parsley
Patent Examiner
Art Unit 3643

PETER M. POON
SUPERVISORY PATENT EXAMINER

12/14/05